CHAPTER IV

INDUSTRIAL STRUCTURE OF INDIA AND ARAB OIL EXPORTING COUNTRIES: A COMPARATIVE AND ANALYTICAL STUDY.
In this chapter the study tries to examine the industrial structure of India and the Arab Oil Exporting Countries. We have to study the production of different industrial goods and importance of industrial structure in the economies of these countries. It will help us to find out the possibilities of economic co-operation between India and the Arab Oil Exporting Countries. For this purpose we have to consider the similar or dissimilar production structure in industrial sector of these countries. If the participating countries in economic co-operation produce some industrial goods then their industrial structures can be considered as similar. It is regarded as dissimilar if the participating countries in economic co-operation produce industrial goods needed by each other. In economic co-operation through various trade agreements needs to increase exchange of at least some of the industrial goods between the participating countries. The possibility of economic co-operation between these participating countries is more when they are producing industrial goods needed by each other. On this background the study tries to examine the industrial structure of India and Arab Oil Exporting countries.
Industrial structure of India and Arab Oil Exporting Countries:

The importance of industry in the economies of India and Arab Oil Exporting countries can be seen by considering its contribution to the gross domestic product (GDP) of India and Arab Oil Exporting Countries. For this purpose the industrial sector of these countries is divided into manufacturing and mining.

In India the degree of industrialisation is very low. It is clear from the contribution of manufacturing to the gross domestic product (GDP) of India. During the period from 1971 to 1979 the share of manufacturing in gross domestic product of India was between 13.36 per cent and 16.11 per cent. In both the years i.e. 1971 and 1972 the share of manufacturing in GDP of India was 13.36 per cent which had declined to 12.90 per cent in 1973 and increased to 14.22 per cent in 1974. In the years 1975, 1976, and 1977 the share of manufacturing in GDP of India was 14.01 per cent, 14.39 per cent and 14.30 per cent respectively. This had increased to 15.66 per cent and 16.11 per cent in 1978 and 1979 respectively (See Table 4.1). Hence it is clear that the share of manufacturing in gross domestic product of India is very low, but during the period from 1971 to 1979 there is a successive increase in the share of manufacturing in the GDP.
While considering the share of mining in gross domestic product of India, we find that the share of mining in its GDP is also very low. During the period from 1971 to 1979 the share of mining in GDP of India had ranged between less than 1 percent and nearly 3 percent. Moreover, it shows a slight increase in the share of mining in GDP of India during the same period. In 1971 the share of mining in GDP of India was 0.94 percent, which went down to 0.83 percent and 0.84 percent in 1972 and 1973 respectively. In 1974, 1975, 1976, 1977, 1978 and 1979 the share of mining in GDP of India had increased to 1.21 percent, 1.24 percent, 1.21 percent, 1.22 percent and 1.38 percent respectively. (See Table A.1). It is remembered that the share of mining in GDP of India is extremely low as compared to the share of agriculture and manufacturing in its GDP. But in recent years there is a successive increase in the share of mining in its GDP.

On the contrary, the degree of industrialisation in all the Arab Oil Exporting Countries is very low. This is clear from the contribution of manufacturing sector to their gross domestic product. The share of manufacturing in gross domestic product of different Arab Oil Exporting Countries during 1971 to 1979 ranged between less than 1 percent and little more than 9 percent. It shows that as compared to India the degree of industrialisation in Arab Oil Exporting Countries is very low. Among Arab Oil
Exporting Countries, during 1971-79, the share of manufacturing in the GDP of Iraq ranged between less than 5 percent and little more than 9 percent. In 1971, 1972, and 1973, the share of manufacturing in GDP of Iraq was 9.92 percent, 8.71 percent, and 8.71 percent respectively. It had declined to 5.21 percent in 1974. But from 1975, the share of manufacturing in GDP of Iraq started increasing. It was 5.94 percent in 1975 (See Table 4.1). In case of Kuwait, the share of manufacturing in its GDP during 1971 to 1979 ranged between more than 3 percent and little more than 6 percent. In 1971, the share of manufacturing in its GDP was 3.90 percent, which had increased to 4.43 percent and 4.86 percent in 1972 and 1973 respectively. But in 1974, it had gone down to 4.43 percent. In 1975, 1976, 1977, and 1978, the share of manufacturing in GDP of Kuwait was 5.59 percent, 5.98 percent, 5.92 percent and 6.12 percent respectively. But in 1979, it had declined to 5.77 percent (See Table 4.1). In the same way during 1971-79, the share of manufacturing in GDP of Oman ranged between less than 1 percent and nearly 2 percent. Although the share of manufacturing in its GDP was extremely low, during the period from 1971 to 1979, it showed continuous increase in contribution of manufacturing to its GDP over the previous years (See Table No.1). In case of Saudi Arabia, the share of manufacturing to its GDP
during the period from 1971 to 1979 varied between more than 4 per cent and little more than 7 per cent. The contribution of manufacturing to its GDP in 1971 was 7.02 per cent. This had fallen to 5.98 per cent and 5.11 per cent in 1972, and 1973 respectively. In 1974 it had slightly increased to 5.27 per cent. But from the year 1975 it had started to decline. In 1975, 1976, 1977, 1978 and 1979 the share of manufacturing in its GDP was 4.96 per cent, 4.52 per cent, 4.45 per cent and 4.54 per cent respectively (See Table 4.1). Moreover, during the same period the share of manufacturing in gross domestic product of United Arab Emirates (UAE) ranged between less than 1 per cent and nearby 5 per cent. The share of manufacturing in GDP of United Arab Emirates was 2.72 per cent in the year 1972. But this had declined to 1.97 per cent, and 0.96 per cent in 1973, and 1974 respectively. In 1975, 1976, 1977 and 1978 the share of manufacturing in GDP of UAE was 1.10 per cent, 1.35 per cent, 3.40 per cent and 4.49 per cent respectively (See Table 4.1). It is clear that the share of manufacturing in GDP of Arab Oil Exporting Countries is very low. At the same time, during 1971-79 it is only in case of Kuwait, Oman and UAE the share of manufacturing in their GDP has increased. The share of manufacturing in GDP of Iraq is comparatively more than other Arab Oil Exporting Countries.
When we consider the share of mining in gross domestic product of the Arab Oil Exporting Countries we find that the share of mining in their GDP is very high. During 1971 to 1979 the share of mining in their GDP ranged between 28 percent and 80 percent. Among the Arab Oil Exporting Countries the share of mining in GDP of Iraq during 1971 to 1979 ranged between more than 28 percent and more than 60 percent. In 1971 the share of mining in its GDP was 35.77 percent. This had declined to 28.24 percent in 1972. It had again increased to 35.30 percent and 60.12 percent in 1973 and 1974 respectively. But in 1975 it had gone down to 56.88 percent and during the year 1976, 1977, 1978 and 1979 it showed an increasing trend over the previous years (See Table A.1). In the same way the share of mining in GDP of Kuwait during the period 1971 to 1979 varied from 60 percent to more than 79 percent. This contribution had declined from 65.70 percent in 1971 to 62.43 percent and 62.75 percent in 1972 and 1973 respectively. In 1974 it had increased to 79.28 percent, but in 1975, 1976, 1977 and 1978 it had again declined to 70.55 percent, 60.72 percent, 61.26 percent and 60 percent respectively. In 1979 it had again slightly increased to 69.94 percent (See Table A.1). In case of Oman the share of mining to its GDP during 1971 to 1979 ranged between 53 percent and 68 percent. This contribution had
declined from 59.2 per cent in 1971 to 53.90 per cent in 1972. In the year 1973, 1974 and 1975 the share of mining in its GDP had increased to 56.21 per cent, 68.36 per cent and 70.55 per cent respectively. But it had again declined to 65.72 per cent, 61.26 per cent and 60 per cent in 1976, 1977, and 1978 respectively. And in 1979 it had slightly increased to 61.46 per cent (See Table A.1). While the share of mining in gross domestic product of Saudi Arabia during 1971-79 ranged between 53 per cent and 79 per cent. But the contribution of mining in its GDP had increased from 60.12 per cent in 1971 to 65.04 per cent and 79.03 per cent in 1972, and 1973 respectively. However, it declined to 78.18 per cent, 66.91 per cent, 63.05 per cent 56.84 per cent and 53.67 per cent during the period 1974, 1975, 1976, 1977 and 1978 respectively (See Table No.1). Moreover, the share of mining in gross domestic product of United Arab Emirates during 1971-79 ranged between 57 per cent and 80 per cent. This contribution of mining in its GDP had increased from 63.58 per cent in 1972 to 69.08 per cent, and 80.55 per cent in 1973 and 1974 respectively. But in 1975, 1976, 1977 and 1979 it had declined to 71.92 per cent, 67.94 per cent, 59.93 per cent and 57.18 per cent respectively (See Table A.1). Hence it is clear that the share of mining in GDP of almost all the Arab Oil Exporting Countries is very high.
The situation of the contribution of manufacturing and mining to gross domestic products of India and the Arab Oil Exporting Countries indicates that

(a) The share of manufacturing in gross domestic product of India is relatively more than the Arab Oil Exporting Countries.

(b) Among Arab Oil exporting countries it is only in the case of Iraq and Saudi Arabia that the share of manufacturing is comparatively more than the other Arab Oil Exporting Countries.

(c) During 1971-79, the share of manufacturing in GDP of India shows increasing trend. While in Arab Oil Exporting Countries except Kuwait, Oman and UAE the share of manufacturing in other Arab Oil Exporting Countries during the same period showed declining trend.

(d) The share of mining in gross domestic product of India is extremely low. On the other hand the share of mining in GDP of Arab Oil Exporting Countries is very high.

(e) During the years 1971-79, the share of mining in GDP of India had slightly increased. But during the same period the share of mining in GDP of Arab Oil Exporting Countries had declined.
In India the share of manufacturing is low as compared with the share of agriculture in its gross domestic product. While in Arab Oil Exporting Countries the share of manufacturing is very low as compared with the share of mining in their gross domestic product. In this respect oil-related activities like production of petroleum and petroleum products contribute an overwhelming proportion to total industrial production of many of the Arab Oil Exporting Countries.\(^1\)

This shows the dependence of India on agriculture and the dependence of Arab Oil Exporting Countries on mining for their national income. This also shows the underdeveloped character of these economies. In underdeveloped economies the shortage of capital, lack of infrastructural facilities and shortage of skilled and semi-skilled labour contribute to low productivity. The Arab Oil Exporting Countries due to huge amount of revenue obtained from the exports of petroleum and petroleum products do not have the problem of shortage of capital. At the same time for the extensive development of manufacturing sector in a country the expansion of infrastructural facilities is of great importance. In most of the Arab Oil Exporting Countries the shortage of skilled and semiskilled

labour, natural resources and infrastructural facilities and the important bottlenecks in their industrial developments. Therefore, in India and Arab Oil Exporting Countries the expansion of roads, railways, electricity, and exploration of natural resources are a prerequisite for their development of manufacturing sector.

The manufacturing sector in India comprises different industrial activities. The important of these are food processing, textiles, spinning and weaving, tobacco manufacturing, leather and leather products, paper and paper products, industrial chemicals, fertilizers, rubber products, drugs and medicines, non-metal products, iron and steel, metal production, machinery, electrical machinery, transport equipment, and motor vehicles. The production of these industrial goods is for both domestic consumption and exports. The manufacturing sector in India has a wide range of industrial activities as against the industrial sector of the Arab Oil Exporting Countries. The adoption of the policy regarding import substitution liberal policy regarding imports of advanced technology and foreign investment enabled India to attain the position of tenth

1. NCAER, Survey of India's export potential within the Indian Ocean Bas-in and Nearby Areas, Kuwait, 1970, p.4.
industrialised nation in the world. On the contrary, in the case of almost all Arab Oil Exporting Countries, they have very limited industrial sector. It is due to the shortage of skilled and semi-skilled labourers and lack of technical know-how. The economies of these countries are completely dependent on single industry i.e. oil. With the increase in oil prices Arab Oil Exporting Countries have also started to develop a few other industries. Among Arab Oil Exporting Countries "industrialisation is far more advanced in Bahrain than anywhere else on the gulf." The industrial sector in Bahrain comprises aluminium production and ship repairing, with a further diversification into iron pelletising being at the development stage. In case of Iraq, manufacturing industry had very modest beginnings by the time the post-war period started, this placed Iraq among the 'more advanced' Arab Countries in the field of industry for those days. At present industrial sector in Iraq is more diversified.

The heavy industries are petroleum refining, electrical equipment, glass, agricultural implements, paper, vehicle assembly, iron and steel, prefabricated housing and cement. Light industry includes spinning and weaving of cotton, wool and silk, textiles, tanning, food processing, cigarettes, drugs, vegetable oil, soaps and detergents, dairy products, sugar refining, grain milling and dates packing. At the same time there are plans for intensive growth of petrochemicals, establishment of aluminium industry and expansion of automobile industry. However, the industrial sector in Kuwait is very limited. The oil-related activities still represent an overwhelming proportion of Kuwait's total industrial output. In 1964 Kuwait chemical fertilizers company was set up. An industrial area has been developed at Shuaiba. There are several factories in the country supplying consumer requirements such as processed food and soft drinks, flour mills, and construction industry. While in Oman the old industrial establishments are copper ware, woven textiles, camel and goat hair carpets and rugs, earthenware pottery, wooden boats. In recent years oil is the prime industry in Oman. Plans are to harness natural gas, Fertilizers, petrochemicals, rubber, generation of electricity, cement.

Ice factories, cold storage and canning, file factory, flour mill, soft drinks, plants, furniture industry and aluminium are the industrial activities in Oman. In case of Qatar its heavy industrial sector is one of the most advanced in the gulf. Apart from oil refining and gas fractionating the major industries are fertilizers, steel and petro chemicals. While the industrial sector in Saudi Arabia has developed in recent years. The big industries include oil refineries, cement and petromin projects. The small industries include cement and plastic pipes, bricks, marble and tile, furniture, cotton textile and carpet mills, shoe factory, detergent, paint and chemical plants, food processing and soft drink. Moreover, the lack of natural resources other than oil and gas, heavy dependence on foreign labour, a small home market and regional competition have led the United Arab Emirates to concentrate on developing indigenous resources. The important industrial activities in the Emirates are Dubri aluminium smelting, cement factories and lime factories and hydrocarbon-based projects in Abu Dhabi.

1. Ajeev Cour, Directory of Trade Between India and the Middle East Countries, Ajanta Publications, Delhi, 1983, p. 81.
3. Ibid.
From the above discussion of manufacturing sector in India and Arab Oil Exporting Countries it is clear that industrial sector in India comprises different industrial activities. While all the Arab Oil Exporting Countries have very limited industrial sector. At the same time the industrial production in India is for both domestic consumption and exports. In case of Arab Oil Exporting Countries the production of industries is mainly for domestic consumption, which is also insufficient for their needs. However, the production of mining in India is for both domestic consumption and exports. But in case of Arab Oil exporting countries the production of mining seems more for exports rather than domestic consumption. Hence, it is clear that both India and Arab Oil Exporting Countries are producing totally different industrial products. But as compared to India the industrial sector in Arab Oil Exporting Countries is limited. This is an important bottleneck to increase trade of industrial goods between India and Arab Oil Exporting Countries, although there are signs of production of industrial goods in these countries needed by each other. However, through economic co-operation this can be changed with the establishments of joint industrial ventures in selected areas of production between these countries. To make this point clear it is necessary to examine the production of industrial goods in India and Arab Oil Exporting Countries.
The important manufactured goods produced in India are food products like meat, poultry products, fish, wheat flour, sugar, cigarettes, tobacco manufactures, cotton, fabrics, woolen fabrics, jute fabrics, butter, foot-ware, newsprint, tires, sulphuric acid, caustic soda, nitrogenous fertilizers, plastic resins, cement, jet fuels, kerosene, distillate fuel residual fuel, gasoline, naphtha, white spirit, lubricating oil, bitumen, etc. Pig iron, crude steel, aluminium, copper lead, zinc, tin, television and radio sets, motor vehicle, diesel engines, internal combustion engines, tractors, sewing machines, etc. While in case of Arab oil exporting countries, they produce very limited manufactured goods like meat, poultry, sugar, cigarettes, butter, cheese, sawnwood, sulphuric acid, caustic soda, nitrogenous fertilizers, cement, jet fuel, kerosene, distillate fuel, residual fuel, gasoline, naphtha, lubricating oil, bitumen, paraffin wax, aluminium road-tractors, soaps, chlorine, sulphur etc.

Although the manufacturing sector in India covers production of different industrial goods, only in case of few industrial goods India has surplus for exports. Moreover, India's exports still largely comprise traditional commodities like, jute manufactures, tea, coffee, sugar, meat, cotton yarn and fabrics etc. But in recent years, considerable diversification has taken place in the
composition of its exports. Importance of traditional items has been reduced and the non-traditional items like engineering goods, pearls and precious stones, fish and fish preparations and leather manufactures, have assumed significant importance.¹

Meat:

India produces meat as well as fish-fresh, frozen and salted. The production of meat had increased from 602 thousand tonnes in 1971 to 609 thousand tonnes in 1972 and 618 thousand tonnes in 1973. It had further increased to 622 thousand tonnes, 629 thousand tonnes, 636 thousand tonnes, 642 thousand tonnes, 646 thousand tonnes and 650 thousand tonnes in 1974, 1975, 1976, 1977, 1978 and 1979 respectively. While the production of fish-frozen and salted had declined from 103.6 thousand tonnes in 1971 to 85.3 thousand tonnes in 1972, which had increased to 108.5 thousand tonnes in 1973 and declined to 102.5 thousand tonnes and 67.3 thousand tonnes in 1974 and 1975 respectively. In 1976 it had increased to 129.7 thousand tonnes and declined to 4.5 thousand tonnes in 1977. In the same way it had increased to 6.7 thousand tonnes in 1978 and declined to 4.1 thousand tonnes in 1979 (See Table No. 2A).

¹ Ajeet Cour, Directory of trade between India and the Middle East Countries, Ajanta Publications, 1983, p. 149.
On the contrary, among Arab Oil exporting countries meat is produced in almost all Arab Oil Exporting Countries. Moreover, all Arab Oil Exporting Countries produce fish fresh, but no one produces frozen, and salted fish. The production of meat in Bahrain had remained constant at one thousand tonnes throughout the period from 1971 to 1979. But in Iraq it had declined from 104 thousand tonnes in 1971 to 102 thousand tonnes in 1972, and 100 thousand tonnes, 94 thousand tonnes and 92 thousand tonnes in 1973, 1974 and 1975 respectively. In 1976 it had increased to 107 thousand tonnes, and in both 1977 and 1978 it had declined to 106 thousand tonnes. But in 1979 it had slightly increased to 107 thousand tonnes. The production of meat in Kuwait had increased from 13 thousand tonnes in 1971 to 16 thousand tonnes in 1972, and 18 thousand tonnes in 1973. In 1974 and 1975 it had declined to 13 thousand tonnes, and 11 thousand tonnes respectively. Again in 1976 1977 and 1978 it had increased to 14 thousand tonnes, 17 thousand tonnes and 19 thousand tonnes respectively. It had slightly declined to 18 thousand tonnes in 1979. While in Oman the production of meat had increased from 3 thousand tonnes in 1971 to 4 thousand tonnes in 1972, and had remained constant at 4 thousand tonnes in 1973. It had further increased to 5 thousand tonnes in 1978, and had remained constant at 5 thousand tonnes in 1979, and 1976, 1977, 1978 and 1979 respectively. In the same way
in Qatar the production of meat in 1971, 1972 and 1973 had remained constant to 2 thousand tonnes respectively, which had increased to 5 thousand tonnes in 1974 and remained constant at 5 thousand tonnes in 1975, 1976, 1977, 1978 and 1979 respectively. But in Saudi Arabia the production of meat had increased from 50 thousand tonnes in 1971 to 54 thousand tonnes in 1972, and 60 thousand tonnes in 1973. But it had declined to 55 thousand tonnes and 46 thousand tonnes in 1974 and 1975 respectively. It had again increased to 50 thousand tonnes, 52 thousand tonnes, 69 thousand tonnes, and 74 thousand tonnes, in 1976, 1977, 1978 and 1979 respectively. While in United Arab Emirates (UAE) the production of meat increased from 2 thousand tonnes in 1971 to 3 thousand tonnes in 1973 and remained constant to 3 thousand tonnes in 1973. It had increased to 4 thousand tonnes in 1974, but in 1975, 1976 and 1977 it had declined to 3 thousand tonnes, 2 thousand tonnes, and 1 thousand tonnes respectively. This had again increased from 1 thousand tonnes in 1978 to 2 thousand tonnes in 1979 respectively (See Table 4.28).

Sugar: The manufacturing of sugar in India is an important economic activity in the economy. There are a number of sugar mills in the country. The sugar
industry ranks second amongst the major agro-industries.\textsuperscript{1} The production of refined sugar in India had declined from 3652 thousand tonnes in 1971 to 3413 thousand tonnes in 1972. But in 1972, 1973, 1974 and 1975 it had increased to 3669 thousand tonnes 4139 thousand tonnes and 4646 thousand tonnes respectively. This had again declined to 4643 thousand tonnes and 4637 thousand tonnes in 1976, and 1977 respectively. While in 1978 it had increased to 6557 thousand tonnes and declined to 5614 thousand tonnes in 1979 (See table A.2A). On the contrary, Iraq is the only Arab Oil Exporting Countries which produces of sugar. The production of sugar in Iraq had increased from 88 thousand tonnes in 1971 to 139 thousand tonnes in 1972, and 202 thousand tonnes in 1973. But it had declined to 190 thousand tonnes and 157 thousand tonnes in 1974 and 1975 respectively (See Table A.7). In a country like Iraq there are three sugar mills and four sugar mills have been planned to be established.\textsuperscript{2}


Coffee and Tea:

India is considered as an important producer and exporter of coffee. The production of coffee had declined from 101.5 thousand tonnes in 1971 to 73.9 thousand tonnes in 1972. But in 1973, 1974 and 1975 it had increased to 87.4 thousand tonnes, 88.9 thousand tonnes and 92.5 thousand tonnes respectively. Again it had declined to 83.6 thousand tonnes in 1976 and increased to 101 thousand tonnes and 119 thousand tonnes in 1977 and 1978 respectively. But in 1979 it had declined to 105 thousand tonnes (See Table 4.2B). On the contrary, among Arab Oil Exporting Countries no one produces coffee.

In case of production of tea, India is considered an important producer and as well as exporter. The production of tea in India had increased from 433.3 thousand tonnes in 1971 to 454 thousand tonnes in 1972, and 460 thousand tonnes in 1973. But it had declined to 452 thousand tonnes in 1974, and increased to 487 thousand tonnes, 511 thousand tonnes, 561 thousand tonnes and 571 thousand tonnes in 1975, 1976, 1977, and 1978 respectively. While in 1979 it had declined to 550 thousand tonnes (See Table 4.2A). On the contrary, among Arab Oil Exporting Countries no one produced tea.
Cotton and cotton yarn:

It covers production of cotton yarn and cotton woven fabrics. The production of these manufacturing goods is also an important economic activity in India. There are a number of cotton mills (spinning and weaving) in the country which produce cotton yarn and cotton woven fabrics. The production of cotton yarn had increased from 914.6 thousand tonnes in 1971 to 1002.1 thousand tonnes in 1972, and 1029 thousand tonnes in 1973. It had further increased to 1032.5 thousand tonnes in 1974, and declined to 1029.8 thousand tonnes in 1975. In 1976 it had increased to 1080.9 thousand tonnes but declined to 1034.2 thousand tonnes in 1977. However, in 1978, and 1979 it had increased to 1136.5 thousand tonnes and 1139.2 thousand tonnes respectively (See Table 4.2A). In the same way the production of cotton woven fabrics in India had increased from 8790 million sq. meters in 1971 to 9590 million sq. meters in 1972 and 9286 million sq. meters in 1973. It had further increased to 9899 million sq. meters in 1974 and declined to 9601 million sq. meters, 9495 million sq. meters and 8248 million sq. meters in 1975, 1976 and 1977 respectively. But in 1978, and 1979 it had increased to 8753 million meters, and 9000 million sq. meters respectively (See Table 4.2A).
On the contrary, among Arab Oil Exporting Countries, only in Iraq cotton yarn and cotton woven fabrics are produced. The production of cotton yarn had increased from 1.7 thousand tonnes in 1971 to 2 thousand tonnes in 1972 and 2.4 thousand tonnes in 1973. But in 1974 and 1975 it had fallen to 2.3 thousand tonnes and 1.4 thousand tonnes respectively (See Table 4.7). Moreover, the production of cotton woven fabrics had increased from 75 million sq. meters in 1971 to 96 million sq. meters in 1972. But this had declined to 95 million sq. meters, 88 million sq. meters and 81 million sq. meters in 1973, 1974, and 1975 respectively (See Table 4.23).

**Jute and jute manufactures**:

In India the jute industry is one of the oldest in the country. As a major foreign exchange earner, it occupies an important place in the country's economy. India is the main producer and exporter of jute and jute manufactures. There are a number of jute mills in the country. The production of jute manufactures (jute fabrics) had declined from 1023.2 thousand tonnes in 1971 to 876.4 thousand tonnes in 1972 which had increased to 1130 thousand tonnes in 1973 and declined to 1050

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thousand tonnes and 1049 thousand tonnes in 1974 and 1975 respectively. But in 1976, 1977 and 1978 and 1979 it had again increased to 1196 thousand tonnes, 1288 thousand tonnes, 1493 thousand tonnes and 1636 thousand tonnes respectively (See Table 4.2A). While in case of Arab Oil Exporting Countries no one produced jute and jute manufactures.

Petroleum products:

Crude petroleum is available in India. With the help of refineries India manufactures jet fuels, motor gasoline, kerosene, white spirits, distillate fuel oil, residual fuel oil etc. The production of crude petroleum in India had increased from 7185 thousand tonnes in 1971 to 7373 thousand tonnes in 1972. But it had declined to 7198 thousand tonnes in 1973, and increased to 7490 thousand tonnes and 8283 thousand tonnes in 1974 and 1975 respectively. It had further increased to 8659 thousand tonnes, 10185 thousand tonnes, 11271 thousand tonnes and 12841 thousand tonnes in 1976, 1977, 1978 and 1979 respectively (See Table 4.2A). The production of petroleum products like jet fuels, motor gasoline, kerosene, white spirit, distillate fuel oils and residual fuel oils except in some years during the period from 1971 to 1979, had shown increasing trends over the previous years (See Table 4.2A).
On the contrary, all the Arab Oil Exporting Countries are considered as important producers and exporters of crude petroleum and petroleum products. Among these Arab Oil Exporting Countries, Bahrain is mainly an oil economy with production that dates back to the early 1930's. With the help of refineries, Bahrain manufactures petroleum products like jet fuels, motor gasoline, kerosene, distillate fuel oils and lubricating oils (See Table 4:2B). It is estimated that the known oil reserves can only be exploited for about another 14 years at 1977 levels. But there is another way through which Bahrain will still benefit from it, oil refinery which expanded several times now. So the chances are that even when its own reserves are exhausted by the end of the century, Bahrain will still benefit from Saudi Arabia's vast reserves.

Iraq also manufactured different petroleum products with the help of refineries. The production of jet fuels, motor gasoline, kerosene, distillate fuel oil, residual fuel oils and lubricating oils showed an increasing trend during 1971-79. Although from the point of view of gross national product, public revenue, and foreign

exchange earnings, petroleum is very important in the economic life of Iraq, as important as it is in Kuwait and Saudi Arabia. This is mainly because, Iraq enjoys other resources. It has developed these resources and sectors in such a way as to have a less unbalanced economy than these other countries. The production and exports of crude petroleum and petroleum products is also an important economic activity in Kuwait. Kuwait manufactures and exported mainly jet fuel, motor gasolene, white spirit, kerosene, distillate fuel oils and residual fuel oils. From 1971 - 79 the production of these products shows increasing trend (See Table A.2). The petroleum reserves of Kuwait have been estimated at more than 8 billion tonnes or enough for about 80 years of production at the present rate. Some estimates also show that Kuwait's oil reserves are more than the known resources of the entire western hemisphere or about 20 per cent of the world's supply. The countries like Oman, Qatar and United Arab Emirates produced crude petroleum and manufactured petroleum products. But among these countries a country like Oman has no oil refinery. All of the


country's requirements for refined products have to be imported at high prices. In case of Qatar the refining capacity in the country is limited. In the same way oil revenues are crucial to the UAE economy, but the UAE's largest oil source is Abu Dhabi. At the same time Abu Dhabi is the federation's only oil refining Emirate but it is currently unable to satisfy even its own requirements of refined products. Moreover, Saudi Arabia with the use of its crude petroleum manufactures the petroleum products like jet fuels, Motor gasoline, kerosene, distillate fuel oils and residual fuel oils. The production of these products during 1971-73 shows increasing trend (See Table 4.25). Crude petroleum and natural gas resources are in great abundance in Saudi Arabia. Indeed, Saudi Arabia has the largest proven reserves of these resources in the world and the extraction and export of oil has been developed extensively, so that the country has reached the rank of the third producer and the first exporter in the world.

Comment:

In order to save foreign exchange and to satisfy the internal demand for cement India utilise available lime stone and produce cement. The production of cement has


increased from 14931 thousand tonnes in 1971 to 15785 thousand tonnes in 1972. But it had declined to 15016 thousand tonnes and 14319 thousand tonnes in 1973 and 1974 respectively. Moreover, it had continuously increased in 1975, 1976, 1977 and 1978 to 16248 thousand tonnes, 18516 thousand tonnes, 19173 thousand tonnes, and 19620 thousand tonnes respectively. But in 1979 it had declined to 18270 thousand tonnes (See Table 4.2A).

On the other hand among Arab Oil Exporting Countries cement is manufactured in Iraq, Kuwait, Qatar and Saudi Arabia. In Iraq the production had increased from 1856 thousand tonnes in 1971 to 1900 thousand tonnes in 1972. It had declined to 1800 thousand tonnes in 1973 and remained constant at 1800 thousand tonnes in 1974. But in the years 1975, 1976, 1977, 1978 and 1979 it had increased to 2385 thousand tonnes, 21720 thousand tonnes, 3170 thousand tonnes, 4999 thousand tonnes, and 5096 thousand tonnes respectively (See Table 4.2B). In the same way the production of cement in Kuwait had increased from 98 thousand tonnes in 1972 to 251 thousand tonnes in 1973. In 1974 this had declined to 229 thousand tonnes and increased to 281 thousand tonnes and 351 thousand tonnes in 1975 and 1976 respectively. Again in 1977 it had gone down to 329 thousand tonnes, but in 1978, and 1979 it had gone up to 621 thousand tonnes and 1040 thousand tonnes.
respectively (See Table 4.2B). However, in case of Saudi Arabia the production of cement had increased from 703 thousand tonnes in 1971 to 2648 thousand tonnes in 1979 during the period from 1971 to 1979. In case of Qatar, except in 1979 the production had increased from 72 thousand tonnes in 1971 to 210 thousand tonnes in 1976. But in 1979 it had declined to 148 thousand tonnes (See Table 4.2B).

**Fertilizers:**

India produces nitrogenous fertilizers. The production of which had increased from 828 thousand tonnes in 1971 to 908 thousand tonnes in 1972, had further increased to 966 thousand tonnes, 970 thousand tonnes, 1109 thousand tonnes, 1322 thousand tonnes, 1648 thousand tonnes, 1723 thousand tonnes and 1839 thousand tonnes in 1973, 1974 1975, 1976, 1977, 1978, and 1979 respectively (See Table 4.2A).

ON the contrary, among Arab oil exporting countries fertilizers are manufactured by Iraq, Kuwait, Qatar and Saudi Arabia. It is in most of the Arab Oil Exporting Countries that the production of fertilizers can be as important as the activity of production of crude petroleum in these countries. Because, "what is not generally known is the presence of huge quantities of
of phosphates all over the Arab world from the Atlantic to the Gulf. This is a potent source of fertilizers and their quantities are as rich and painful as oil. The day is not far off when the phosphates would replace the rapidly eroding quantities of oil as the natural potential of the Arabs both for themselves and the world. The production of nitrogenous fertilizers in Iraq had increased from 6 thousand tonnes in 1971 to 11 thousand tonnes in 1972, and 26 thousand tonnes in 1973. It had further increased to 28 thousand tonnes and 34 thousand tonnes in 1976 and 1975 respectively. But in 1976 it had gone down to 24 thousand tonnes and increased to 25 thousand tonnes, 125 thousand tonnes and 166 thousand tonnes in 1977, 1978 and 1979 respectively. In the case of Kuwait the production of nitrogenous fertilizers had increased from 86 thousand tonnes in 1971 to 185 thousand tonnes in 1972 and 269 thousand tonnes in 1973. It had further increased in 290 thousand tonnes in 1974, but fallen to 275 thousand tonnes, 259 thousand tonnes and 228 thousand tonnes in 1975, 1976 and 1977 respectively. Again in 1978 and 1979 it had gone up to 271 thousand tonnes and 310 thousand tonnes respectively (See Table 4.2). In case of Qatar the production of nitrogenous fertilizers except in 1978 had increased from 14 thousand tonnes in 1974 to 118 thousand tonnes in 1974.

However, in Saudi Arabia the production of nitrogenous fertilizers had gone up from 23 thousand tonnes in 1971 to 35 thousand tonnes in 1972 and 69 thousand tonnes in 1973. It had fallen to 61 thousand tonnes in 1974 and increased to 81 thousand tonnes and 100 thousand tonnes in 1975 and 1976 respectively. But in 1977 it had again fallen to 84 thousand tonnes and increased to 93 thousand tonnes and 121 thousand tonnes in 1978 and 1979 respectively (See Table 4.2A).

**Paper and paperboard:**

India produces mainly printing and writing paper, craft paper and machine made paper and paperboard. The production of these products together had increased from 780 thousand tonnes in 1971 to 803 thousand tonnes in 1972. But in 1973 it had declined to 796 thousand tonnes and went up to 835 thousand tonnes and 859 thousand tonnes in 1974 and 1975 respectively. It had further increased to 850 thousand tonnes, 929 thousand tonnes, 990 thousand tonnes and 1004 thousand tonnes in 1976, 1977, 1978 and 1979 respectively (See Table 4.2A).

On the contrary, among Arab Oil Exporting Countries only Iraq manufactured printing and writing paper. The production of which had increased from 25 thousand tonnes
in 1972, 9 thousand tonnes in 1973 and 12 thousand tonnes in 1974. But in 1975 it had gone down to 8 thousand tonnes and increased to 12 thousand tonnes in 1976. Again in 1977 it had declined to 9 thousand tonnes and remained constant to 9 thousand tonnes in 1978 and 1979 respectively (See Table 4.2B).

From the above discussion of manufacturing sector and production of different manufacturing goods it is clear that the manufacturing sector comprises production of different goods. On the contrary in Arab Oil Exporting Countries due to non-availability of other minerals (except crude petroleum) their economies are mainly dependent in oil and oil products. Hence the main objective of manufacturing in these countries is to reduce dependence on single industry - oil and create environment for the development of other industries. At the same time shortage and non-availability of technical know-how are the other limitations of industrial development in most of the Arab Oil Exporting Countries. In India the shortage of capital resources is an important limitation for the further development of manufacturing in the country. Hence, through economic co-operation India and Arab Oil Exporting Countries can utilise the methods of economic co-operation such as exchange of technical expertise, skilled
labour, natural and monetary resources for their further development of manufacturing sector. Moreover, the present structure of industrial production in these countries also helps to enhance exchange of these goods between themselves.

Mining Sector:

India and Arab Oil Exporting Countries have deposits of different minerals, but they are concentrated mainly in India. In case of Arab Oil Exporting Countries except crude petroleum other minerals are very limited.

India:

India has deposits of different minerals like coal, iron ore, bauxite, crude petroleum, chromium ore, magnesite, manganese, tungsten, copper ore, mica crude and phosphate. Among these minerals the production of coal (hard) had increased from 71824 thousand tonnes in 1971 to 75657 thousand tonnes in 1972 and 77870 thousand tonnes in 1973. It had further increased to 84080 thousand tonnes, 95890 thousand tonnes and 100876 thousand tonnes in 1974, 1975 and 1976 respectively. But in 1977 it had fallen to 97 thousand tonnes and increased to 101541 thousand tonnes and 103454 thousand tonnes in 1978 and 1979 respectively. The production of iron ore had increased from 21582 thousand tonnes in 1971 to 22155 thousand tonnes in 1972. It had further increased to 22369
thousand tonnes in 1973, but declined to 22157 thousand tonnes in 1974 but declined to 22157 thousand tonnes in 1974. It had increased to 26147 thousand tonnes and 27430 thousand tonnes in 1975 and 1976 respectively. But in 1977 and 1978 it had declined to 26359 thousand tonnes and 24776 thousand tonnes respectively. However, it had increased to 25066 thousand tonnes in 1929 (See Table No.3A). The production of bauxite except in 1973 and 1974 had shown an increasing trend over the previous years during the period from 1971 to 1979.

The production of chromium ore also shown an increasing trend except in 1976, 1977 and 1978 during the period from 1971 to 1979. Moreover, the production of magnesite and manganese ore etc. had except in few years, shown increasing trend during the same period over the previous years.

Arab Oil Exporting Countries:

The deposits of minerals in most of the Arab Oil exporting Countries are crude petroleum, natural gas, aluminium, salt, sulphur, natural gasolene and sulphur native. But deposits of crude petroleum, natural gas and natural gasolene is the specility of these countries. Among these countries aluminium is available in Bahrain, sulphur in Iraq, sizeable reserves of copper and cromite have been found in Oman. Moreover, in Saudi Arabia minerals available are lime stone gypsum, gypsum, marble, clay and salt. The minerals like
iron ore, copper, gold, lead, zinc, silver and Uranium are known to exist. The production of crude petroleum in Bahrain had declined from 3739 thousand tonnes in 1971 to 3488 thousand tonnes in 1972 and 3411 thousand tonnes in 1973. But in 1974 it had further declined to 3363 thousand tonnes and in 1975, 1976, 1977, 1978, and 1979 it had further declined to 3050 thousand tonnes, 2902 thousand tonnes, 2895 thousand tonnes, 2754 thousand tonnes, and 2734 thousand tonnes respectively. However, the production of aluminium had increased from 10.2 thousand tonnes in 1971 to 70.1 thousand tonnes in 1972 and 102.6 thousand tonnes in 1973. It had further increased to 118 thousand tonnes in 1974 but declined to 116.5 thousand tonnes in 1975. In 1976 it again increased to 122.1 thousand tonnes but declined to 121.4 thousand tonnes in 1977. In the same way it increased to 132.2 thousand tonnes in 1978 and declined to 123.3 thousand tonnes in 1979. The production of crude petroleum in Bahrain is limited.

In Iraq the important minerals available are crude petroleum, natural gas, salt, sulphur and natural gasoline. The production of crude petroleum is an important economic activity in the country. Production of crude petroleum has declined from 83266 thousand tonnes in 1971 to 72144 thousand tonnes in 1972 and increased to 99542 thousand tonnes in 1973. But in 1974 it again declined to 96059 thousand tonnes and increased to 111168 thousand tonnes and 118905 thousand tonnes in 1975 and 1976 respectively. In 1977
declined to 115145 thousand tonnes but increased to 125626 thousand tonnes and 17040 thousand tonnes in 1978 and 1979 respectively. The production of sulphur had increased from 137 thousand tonnes in 1972 to 375 thousand tonnes in 1973, and 610 thousand tonnes in 1974. But it had declined to 500 thousand tonnes and 582 thousand tonnes in 1975 and 1976 respectively. While in 1977 it had increased to 620 thousand tonnes and again declined to 600 thousand tonnes and 550 thousand tonnes in 1978 and 1979 respectively (See Table 4.3B).

The production of crude petroleum is an important economic activity in Kuwait. Natural Gas, salt and natural gasolene are other minerals available in the country. Among these minerals the production of crude petroleum had increased from 160856 thousand tonnes in 1971 to 165800 thousand tonnes in 1972. But it had fallen to 152418 thousand tonnes 128609 thousand tonnes and 105232 thousand tonnes in 1973, 1974 and 1975 respectively. However, in 1976 it had increased to 108046 thousand tonnes and in 1977 declined to 98673 thousand tonnes. Again in 1977 and 1979 it had gone to 107398 thousand tonnes and 125313 thousand tonnes respectively (See Table 4.3B).

In the case of Oman the crude petroleum is an important mineral deposit. But sizeable reserves of copper and cronite have been found. The production of crude petroleum during the period from 1971 to 1979 had declined from 14685 thousand tonnes in 1971 to 14056 thousand tonnes in 1972.
But it had increased to 14630 thousand tonnes in 1973, and declined to 14466 thousand tonnes in 1974. Again in 1975 and 1976 it had increased to 17016 thousand tonnes and 18290 thousand tonnes respectively. But it had fallen to 16968 thousand tonnes, 15696 thousand tonnes and 14722 thousand tonnes in 1977, 1978 and 1979 respectively (See Table 4.9).

In the same way the production of crude petroleum is also an important economic activity in Qatar. The deposits of other minerals in the country are natural gas, and natural gasolene. Among these minerals the production of crude petroleum had increased from 20645 thousand tonnes in 1971 to 23493 thousand tonnes in 1973 and 27502 thousand tonnes in 1973. But in 1974 and 1975 it had gone down to 24698 thousand tonnes and 21102 thousand tonnes respectively. Again in 1976 and 1977 it had increased to 24018 thousand tonnes and fallen to 21414 thousand tonnes. But in 1978 and 1979 it had increased to 23555 thousand tonnes and 24500 thousand tonnes respectively (See Table 4.3B).

In Saudi Arabia the important minerals available are crude petroleum, natural gas, sulphur, natural gasolene, limestone, gypsum, marble, clay, salt, ironore, copper, gold lead, zinc, silver and uranium. Of these minerals the production of crude petroleum had increased from 23743 thousand tonnes in 1971 to 300198 thousand tonnes in 1972 and 37788 thousand tonnes in 1973. It had further increased to 422705 thousand tonnes in 1974, but went down to 352494
thousand tonnes in 1975. It had increased to 425804 thousand tonnes and 458596 thousand tonnes respectively. But in 1978 and 1979 it had declined to 414757 thousand tonnes and increased to 470583 thousand tonnes (See Table No.3B). Moreover, in case of United Arab Emirates (UAE) the minerals available are crude petroleum, natural gas, and natural gasoline. However, the production of crude petroleum is the main economic activity in the country. Its production had increased from 51249 thousand tonnes in 1971 to 58109 thousand in 1972 and 74193 thousand tonnes in 1973. It had increased to 81441 thousand tonnes, 82058 thousand tonnes, 95265 thousand tonnes, 97555 thousand tonnes, 99005 thousand tonnes, and 89640 thousand tonnes in 1974, 1975, 1976, 1977, 1978 and 1979 respectively (See Table 4.3B).

From the above discussion, it can be said that among India and the above referred Arab Countries, India has deposits of different minerals, while Arab Oil Exporting Countries have deposits of few minerals. The important mineral product available in all Arab Oil Exporting Countries is crude petroleum.

Overall, the industrial structure of India and Arab Oil exporting countries is favourable to enhance economic co-operation between these countries. The industrial sector in India is highly developed among the developing countries in Asia. India produces a variety of industrial goods. On the
contrary, all the Arab Oil Exporting Countries are mainly dependent on the single economic activity viz. production of petroleum and petroleum products. Scarcity of natural resources, non-availability of managerial skills, technical, important know-how and skilled labours are the limitations of industrial development in all the Arab Oil Exporting Countries. However, in India scarcity of capital resources is the main bottleneck for its further industrial development. On this background, the economic co-operation between India and Arab Oil Exporting Countries will help them for their industrial development. Through economic co-operation these countries can enhance interchange between themselves in respect of natural resources, monetary resources, technical know-how, managerial expertise and skilled labour. In this respect it is necessary to examine the trade structure of industrial goods of these countries. This point is discussed in more detail in Chapter V relating to trade pattern of India and Arab Oil Exporting Countries.